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ABSTRACT

Vision screening appears to be particularly important for adult education (AE) programs. Although expected failure rates for school-age population vision screenings are 15 percent, vision screenings of AE clients have yielded dramatically higher failure rates. Vision screenings of 106 Illinois AE students have shown that 66 percent had one or more vision problems; screenings of 117 adult students in New York City literacy programs also found a 66 percent failure rate. As part of a larger study, vision screening data were collected on 34 randomly selected students enrolled in adult basic education (ABE) or General Educational Development instruction in a New York state AE program. Results were as follows: 79 percent failed 1 or more of 10 subtests of the New York State Optometric Association Vision Screening Battery that were administered; the percentage of students who failed subtest(s) that could affect the ability to do near-point work such as reading and writing was 74 percent; of 15 ABE level 1 students tested, all had 1 or more vision problems; and students in higher levels showed lower but still large percentages of failure. These three studies provide compelling evidence that vision screening of AE populations is essential to give all adults the maximum opportunity to learn. Adult educators should ensure that all students receive vision screening, use a vision checklist, and develop resources or contacts for financial assistance or free services to those in need. (YLB)

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Vision Screening: A Must for Adult Education Programs

By PAGE SIMPSON BRISTOW

When you think of vision screening, do you remember the old Snellen Eye Chart with the big E and progressively smaller letters that you read from across the room? The distance acuity measured by that chart is certainly necessary to function in today's world; however, vision and reading experts agree that near-point vision, required to learn from standard written materials, should also be screened (Spache, 1976; Jobe, 1976; Getman, 1985; Thau, 1991; Zaba, 1991).

Near-point acuity is an obvious prerequisite for near-point work but is not the "complete picture." Modern vision screening instruments also measure the eyes' ability to work as a team, their ability to maintain focus at near-point, and the efficiency of eye movements across multiple lines of print. Inability or inefficiency in these areas can result in headaches, nausea, dizziness, eyes tiring easily, double images, and reduced persistence or avoidance of reading and other written work.

Vision screenings of adult education clients have yielded dramatically higher failure rates.

Vision screening is important for all student populations; however, it appears to be particularly important for adult education programs. Although expected failure rates for school-age population vision screenings are 15% (Thau, 1991), vision screenings of adult education clients have yielded dramatically higher failure rates. These results, summarized below, indicate that vision screening is especially important for an adult education population.

Keefe and Meyer (1988) screened the vision of 106 Illinois adult education students and found that 66% of them had one or more vision problems; 63% had near-point vision problems. The percentage of vision problems was progressively larger in groups with lower reading ability, ranging from 53% in the 7.0 reading level group to 89% in the non-reader group. Vision screening of 117 adult students in New York City literacy programs obtained similar results: a 66% failure rate (Thau, 1991). The largest percentage of failures (40%) occurred in near-point visual acuity.

As part of a larger NCAL study (Venezky, Bristow, Kirsch, & Sabatini, 1992), vision screening data were collected on 34 randomly selected students enrolled in ABE or GED instruction in a New York State adult education program. ABE I students were more heavily sampled by including all students who were judged to be reading too low to take the *Tests of Adults Basic Education (TABE)*. In *(continued on page 6)*

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addition, 25% of students who took TABE level E (easy) and 10% of students who took the D (difficult) level were screened. In all, 34 students were tested.

Ten subtests of the *New York State Optometric Association (N.Y.S.O.A.) Vision Screening Battery* were administered to students: Visual Acuity-Distance; Hyperopia; Visual Acuity-Near; Convergence; Stereopsis; Fusion-Muscle Balance Vertical; Fusion-Far; Fusion-Near; Eye Tracking; and Color Vision. Students who normally wore glasses were wearing them for all testing.

Of the students tested, 79% failed one or more of the vision subtests administered.

Of the students tested, 79% failed one or more of the vision subtests administered. We also computed the percentage of students who failed subtest(s) which could affect one's ability to do near-point work such as reading and writing. The following *N.Y.S.O.A. Vision Screening Battery* subtests were judged to affect near-point learning: Hyperopia; Visual Acuity-Near; Convergence; Fusion: Muscle Balance-Vertical; Fusion-Far; Fusion-Near; and Eye Tracking. The percentage of students who exhibited failures on one or more of these subtests was 74%.

Next we considered students' performance by educational level groupings. Of the 15 ABE 1 students tested, all (100%) of them had one or more vision problems that could interfere with vision in near-point work. Students in higher levels showed lower, but still large, percentages of failure: ABE 2, 43% (n=7); ABE 3, 25% (n=4); and GED, 75% (n=8).

Several factors may have inflated the failure rates in our study. Since the lowest level readers were more heavily represented in the sample, their proportionately higher vision failures inflated the total percentage of vision problems found. Also, although all students tested spoke English, it was not the native language for the majority of them; therefore they may have been at a disadvantage on subtests requiring identification of English numbers and letters, particularly the Eye Tracking subtest which has time-limited norms (P.A. Gallagher, personal communication, September 10, 1992). Adult beginning readers may also have been at a disadvantage in identifying letters and numbers. In addition, the new readers may have had little near-point vision practice and thus may not have had the opportunity to develop fully the muscles used in sustained fusion and eye movements required for reading and other school near-point activities.

Finally, no adult norms are presently available on the N.Y.S.O.A. *Vision Screening Battery*; instead, the norms for 14 year-olds (the oldest child norms available) were used to set minimum passing requirements for adults. The appropriateness of these norms for an adult education population has yet to be determined.

Nonetheless, these three studies provide compelling evidence that vision screening of adult education populations is essential to ensure adults have maximum opportunity to learn. Good vision is vitally important to the success of returning adult students. An adult whose vision is not clear is unlikely to make satisfactory progress and may become discouraged and leave programs before goals are met.

Vision screening of adult education populations is essential to ensure adults have maximum opportunity to learn.

It is important to remember, however, that screening programs are just that, a method of identifying people who may have vision problems and warrant examination by a vision specialist. Screening is designed to identify potential problems; a vision specialist is necessary to make a final diagnosis. Thus the number of students who will need vision correction is expected to be smaller than the number referred; however, it can still be expected to be quite large given the high failure rates reported in these three studies.

Anyone in the United States who feels that they may qualify for Vision USA can call 1-800-766-4466, in January, 1993 only, to be screened for eligibility.

What can adult educators do? Ideally, all adult education students should receive vision screening. Both near- and far-point vision must be screened to ensure that students can handle sustained near-point work as well as the far-point vision that is tested by the familiar Snellen chart. If all students cannot be screened, then adults with the lowest reading achievement should receive screening first since they exhibited the greatest number of problems in these studies.

At a minimum, all adult education staff should use a vision checklist such as the one included in the inexpensive brochure by Getnan (1985). Adults who exhibit observable problems should be screened for both far-point and near-point vision and referred to a vision specialist for conclusive diagnosis and appropriate correction as needed.

Adult programs can also develop resources or contacts for financial assistance or free services to those in need. The American Optometric Association's

Adult Literacy Initiative, Vision USA, might be helpful; it is a program for low-income working people and their families who haven't had an eye exam in the last year. Anyone in the United States who feels that they may be qualified can call 1-800-766-4466, in January, 1993 only, to be screened for eligibility.

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